Thriving in the Downturn

A Practical Guide for Architects and Engineers

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Introduction

According to ARCHITECT’s 2008 Confidence Survey, 94% of respondents are worried about how the economic downturn will affect their firm.

Evidence of a drop in business for most architecture and engineering firms (A&E), commercial projects (offices, retail, and hotels) began to show as early as 2007. Even activity in the usually buoyant healthcare and education markets has also weakened significantly over the last few months.

Therefore, the coming period looks set to test the A&E worlds like nothing in living memory. For many, 2009 will be a business defining and career-defining year.

Yet there are practical responses, centred on financial prudence, market facing strategies and the harnessing of technology to bring efficiencies, which make this an ideal time to ‘put the house in order’.

Thriving in the Downturn: a Practical Guide for Architects and Engineers charts best practice for coping with the economic downturn, and provides discussion and visions of the future from which organisations can benchmark and learn from the best.

As part of our research program, Unwired Ventures conducted a broad survey of architects and engineers, in order to gauge the temperature and to harvest feedback on possible new directions for the industries. These survey results are discussed and help inform this report.
Where Are We Now?

Today it seems that every element of the supply chain is under severe economic pressure. The following are selected ‘lowlights’ of that pressure:

House Builder Strife

City Lofts, the flats developer, went into administration in July 2008. David McLean Holdings, which is building hundreds of apartments at Kings Waterfront in Liverpool, collapsed with up to £100 million of debt in October 2008. Barratt Homes’ profits were down by 68% in 2008¹. Finally, Taylor Wimpey recently revealed its build rate has slowed to 40% of previous levels².

Developer Trouble

Commercial property deals are essentially frozen and existing portfolios have been seriously devalued.

Hammerson, which owns the Foster-designed Bishops Square scheme in London, reported a £407 million devaluation in its property portfolio in August 2008 and has now postponed all construction work³. Land Securities has shelved long-standing plans to break itself into three separate groups, and has cut around £1.7 billion off the value of its portfolio⁴. In addition, British Land has postponed plans to build Sir Richard Rogers’ ‘Cheesegrater’ in the City until at least 2010. The decision was taken by former Chief Executive Stephen Hester, who said “the office market will start turning up again by 2010, but if we deliver the building in 2011 we would have to start looking for tenants in 2010 and we would rather do it a little later into the cycle, particularly with such a high-profile special building.”

Nigel Webb, Head of Development at British Land, said, “this will be a very tough market for at least a year. The investment market is stagnant, demand from occupiers is down and rental values are down. Against that background, commercial developments will all be pretty difficult, and speculative development has simply stopped”.

¹ Announced February 26th 2009
² Reported in The Independent, November 11th 2008
³ Reported in The Guardian, 3rd March, 2009
⁴ Reported by Building Design, 13th November, 2008
Architects Feel it Too

At the ‘superstar’ end of the architecture industry, Richard Rogers Partnership and Foster and Partners have both announced significant staff shedding, while Gehry Partners has lost around half of its staff. Announcing 35 job losses in March 2009, Richard Rogers commented that the recession was “the most ruthless and wide-ranging” that he can remember. Almost all of the practices interviewed for this report have already been forced to shed staff. An industry with an unusually ‘long tail’ of small practices now sees those practices under huge financial pressure as projects are put on hold and a recession of indeterminate duration stretches before them. These small practices employ the majority of architects, are unlikely to have strong cash reserves (the boom was largely metropolitan, business has long been tough for this group), yet to quote Martin Cook, Design Director at architecture and engineering practice BDP “we need the flair of innovation from the small guys”.

The A&E Market in Numbers

According to The Office of National Statistics (ONS) Construction carries a weighting of 58.6 per 1000 by Gross Value Added, while Architectural Services carries one of 16.4 per 1000. So, effectively:

Construction contributes approximately 5.9% of GDP
Architecture contributes approximately 1.6% of GDP

From this total, 32% of the value comes from public sector projects, 20% from overseas projects (from both the public and private sectors) while the remaining 48% is derived from work across the range of the private sector.

The Royal Institute of British Architects (RIBA) conducted a large practice survey in 2008 (defined as employing 50 or more staff) and announced the following figures, which show the range of sectors in which firms practice. The clear conclusion is that large practices operate across a broad range of sectors. While 84% of practices are involved in residential work, according to RIBA Director of Practice Adrian Dobson, “most of the value is found in the Education and Commercial sectors”.

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5 Reported in The Guardian, 3rd March 2009
Finance, Form and Fashion

It is important to recognise that the aesthetics and form of the A&E industries have long reflected, and been moulded by, the prevailing economic conditions.

When the British economy was put under severe pressure by the oil crisis and three-day week in 1973 and 1974, it marked the end of concrete high-rise estates, public-sector architecture, Brutalism and much modernist design. When the economy picked up, architects had moved on to post-modern design, marked by bright colours, visual jokes and more. When the economy dipped at the end of the 1980s, post-modernism had had its day, and would eventually be replaced by the ‘iconic’ building style that has now been so rudely stopped in its tracks.

Similarly, the last ten years has seen a construction boom that has transformed the skyline of many cities around the world. London, Leeds and Newcastle, Berlin, Beijing and Shanghai are all virtually unrecognisable from the cities they were in the early 1990s. According to the architecture critic Jonathan Glancey, austere and minimalist design was replaced by “a kaleidoscopic, cinematic new architecture”, exemplified by the likes of Frank Gehry, Zaha Hadid and Rem Koolhass.

Bigger, faster, stronger, shinier buildings, perhaps exemplified by the iconic Swiss Re Building (‘The Gherkin’) in London, appeared to suggest an ambitious, bold and unfettered architectural ethic. However, with hindsight they could equally be seen as the reflection of a massive, credit-based and unsustainable economic boom.

This report will examine how the A&E industries can adapt and thrive in the current conditions, and present a future vision of the industries. The A&E industries are now rethinking their game. They are in survival mode, assessing how to reshape their businesses in line with economic conditions, but also how to adapt their ‘product’ to be appropriate in an ever-shifting world. This report aims to inform that assessment.
Public Works/Infrastructure Projects

Many billions of dollars are being spent on infrastructure projects worldwide, indeed many projects have been brought forward, particularly in the developed economies, as governments look to use all of the levers at their disposal to provide an economic stimulus.

While infrastructure projects in the developing world tend to focus on energy and transport infrastructure, the developed world tends to focus on upgrades to existing infrastructure such as schools and hospitals, in the form of public private partnerships, with an attendant benefit to the A&E industries. For example, in the UK, the Building Schools for the Future (BSF) program is the biggest school buildings investment program, aiming to rebuild or renew nearly every secondary school in England.

Government stimulus plans have shown significant variance by country, with an effort to co-ordinate action being agreed at the G20 summit held in April 2009. Opinion varies on the value and effectiveness of these measures, but almost all agree that economic conditions are sufficiently bleak to make governments ‘the consumer of last resort’. Nigel Webb of British Land commented that “infrastructure projects may not directly benefit us, but we regard them as vital for the A&E industries and construction in general. In many cases it will make the difference between talent leaving or staying in the industries, and as a large developer, we need that talent to be available to us”.

A&E firms hoping to benefit from such plans must ensure that:

- They are qualified to work in the government or relevant sector
• They have built effective relationships with government or relevant agencies
• They have a history of successful government projects or can team with others who can demonstrate such a history
• They can effectively present their qualifications and abilities
• They do their homework, including knowing the financial trail and project procurement procedures

In our A&E survey, when asked: “will public works/infrastructure projects have a significant positive effect for your business in the coming period?” most respondents felt positively, answering:

Yes: 58%
No: 28%
Don’t know: 16%

However this isn’t a ringing endorsement of infrastructure projects, with 42% of respondents unsure of their merits. Our interview program revealed similar mixed sentiment. Chris Brandon, a founder of the Pringle Brandon practice, suggested, “some practices will benefit but they will be few and far between. 90% of practices, all but the largest firms, will see no return”. He also detected a hole in the program; “the government really needs to do something about the housing crisis, this would be a really far-reaching and valuable contribution which all in the industry could benefit from”.

Nick Pulford, Global Financial Director of WSP Environmental and Energy commented that “infrastructure projects will probably have a narrow impact on us; they’re one offs and don’t represent sustainable growth, which is where all organisations need to get to”.

A Green Bounce?

“Now is a chance to stop and think, and I think when the industry finds its feet again, the green credentials of buildings will come to the fore.”

Chris Brandon, Founder, Pringle Brandon.

In popular understanding, issues of sustainability are rather ‘last year’, having given way to the immediate pressure of the recession. Our interview program tends to support this view, but there is much to suggest that the A&E industries must nevertheless look to transition their business to successfully compete and thrive in a future, sustainability-led market.
Jeff Stewart, President of US practice Architeriors commented that the “environment is not high on the priority list of our clients right now. Investment costs tend to be high and our clients are less interested in intangible or long-term payback and more interested in what measures will cost in today’s dollars”. Set against this, a recent survey by the World Business Council for Sustainable Development found that “green costs” are typically overestimated by 300%, while the true premium is estimated at around 5%.

Nick Pulford of WSP Group also observed that, “green spend can seem like discretionary spend, but this approach will soon give way. Legislative demands around energy use will increase, and pretty soon all clients will realise that there’s both a green benefit and a ‘P&L’ benefit from initiatives which reduce energy waste”.

The financial crisis has merely placed an unofficial and temporary moratorium on building sustainability. The climate change imperative behind the sustainability movement continues to grow in seriousness. The drive towards green buildings, with a particular accent on the refurbishment of existing real estate, will return in earnest when the immediate pressure is released. A list of the new sustainability competencies to be demanded from the A&E industries can be found in Appendix II.

Allied to the issue of sustainability, our research program highlighted the problem of developers finishing new buildings to their own specification, or to ‘Category A’, rather than merely to shell and core. Developers continue to do this because they feel that the building will be easier to let, while incoming tenants tend to remove such a generic fit-out, and replace it with their own. This waste in the system will need to be addressed on both economic and sustainability grounds.

Our survey confirmed that many within the A&E industries are expecting a ‘green bounce’. 48% of respondents agreed that a green bounce is on the way, while 32% thought not, with 20% unsure.

The challenge is to retool the company and develop the necessary skills to take advantage when the bounce arrives.
Over Supply of Property Stock

It seems likely that the recession in the A&E industries will be prolonged due to an over-supply of commercial and rented residential property stock\(^6\). The economic boom saw a prolonged period of real-estate growth, particularly in the metropolitan centres, which moved one Head of Property from a leading legal firm to comment that "we employed anyone who could write their name, and then acquired the property to put them in".

The problem is surprisingly complex. The new-build market has effectively been frozen, with major question marks over existing larger projects. In the commercial sector, the recent boom years saw many organisations, particularly those in professional services, take steps to implement flexible working practices and a flexible use of space which could allow the organisation to use it’s real-estate footprint more intensively. However this process has now been interrupted, long before it has reached widespread adoption. The result is that many companies are now downsizing significantly from an already generous per-person space allocation. However, with the property market moribund, few organisations are looking to move offices while the economic outlook is so uncertain. Finally, when they do look to adapt their workspace to new conditions, the likelihood is that the sudden recession and pervasiveness of mobile working to minimise real estate footprints, will lead organisations to seek flexibility, in the form of shorter break-clauses and term rentals, as well as relying on more sub-contracting and offshoring.

As Nick Pulford of WSP Group commented, “clients won’t recreate the ‘bums on seats’ mentality, with rapid growth and instant demand. First of all they’ll find flexible recruiting policies and the real estate policy will follow from that”. Such systemic problems will take some time to iron themselves out.

In the white-heat of the recession, cash is king. When recovery begins, flexibility will be king.

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\(^6\) See RICS ‘Excess Supply Pushes Rents Lower’, March 19\(^{th}\), 2009
Best Practice; Coping and Thriving Strategies

The A&E industries have been able to surf the wave of the economic boom, but the senior professionals who we interviewed were quick to admit that weaknesses in how they operated are now being exposed by the recession.

Nick Pulford of WSP Group suggested that there has been a generalised complacency across the engineering industry. “The industry has tended to employ and use people, rather than harness technology to free up capacity. We tend to redesign the wheel a lot, when technology allows replication from other projects, and could also allow us to streamline our business processes”. Chris Brandon of Pringle Brandon also added, “there’s been a degree of profligacy in all resources which must now be corrected”.

Set against this, Nigel Webb of British Land voiced the ‘Catch 22’ situation in which the A&E industries find themselves. “The industries have built up large organisations partly because people like us demand that they are responsive now. I can see that they have a tough balance to strike”.

Internal Issues

1. **Financial Prudence** is clearly the single most important strategy in the short-term. With the A&E industries in ‘survival mode’, cash is king. At a high-level, organisations must:

   - Assess capital needs (3.12)
   - Control credit (2.8)
   - Understand the true valuation of work in progress (2.18)
   - Forecast cash flow (1.84)

When our survey asked the A&E industries to rank the elements above in priority order, the results were as shown in brackets. In fact there was little agreement on which elements were most important, perhaps reflecting the vital and equal importance of all four.

2. **Put the House in Order.** Does a company have the correct human and technological systems to give true visibility into its business performance? In order to achieve the top-level financial prudence goals listed above, the organisation must be
able to manage and track the process of specific initiatives, to forecast revenue accurately and to capture, present and disseminate project, financial and marketing information around the business.

In the current economic climate, business decision-making must be both metrics driven and based on an accurate view of the state of the company.

Our survey revealed a mixed picture in this area. When asked: “Are you currently able to capture, present and disseminate meaningful project, financial and marketing information around the business?” Responses were as follows:

Yes: 70%
No: 16%
Not a priority: 14%

Examining the profile of respondents, it became clear that those responding ‘yes’ tended to represent larger firms, who are more likely to have reached a critical size which makes such implementations a clear business necessity, while the three in ten who responded differently tended to be from smaller firms.

It will be interesting to establish if the industry continues to feel such confidence in its systems in 12 months time and assuming the recession continues.

3. **Strategic Thinking.** Most A&E firms today are working at full stretch. Navigating the tough waters of the recession has required many workers to work ever harder, competing for business, covering the positions of redundant staff and so on, however it’s vital that businesses continue to allocate time to strategic thinking. The recession has changed the market, and the company must adapt the strategy accordingly, with the goal of seeing out the recession, then taking advantage of the recovery.

Some vital areas of consideration include:

- Can the business address a broader spread of markets, ideally those which are recession resistant?
- Have the threats to the business changed? Perhaps larger competitors are looking to ‘bottom-feed’, or banks and credit providers have changed their policies to the detriment of the business.
- Understand several “what if” scenarios, ranging from the optimistic to the disastrous, and develop tailored strategies, which can be implemented quickly.
• Make a sober assessment of the company’s talent pool. What skills and competencies are already in place? How do they fit into the future of the company? Are their employees who are vital to the future? Are there under-achievers? Allied to this is the need to harness the ideas and cohesiveness of the team: No management team can claim a monopoly on wisdom, and only a team effort will pull companies through in difficult times.

• Examine the procedures and effectiveness of RFQ and RFP responses. In a climate of increased competition for fewer projects, it’s vital that companies tighten up, developing higher quality proposals.

• Address the company’s cash/debt position. Cash must be forecasted for future months, and against a range of scenarios. Companies in a good cash position should understand the potential pitfall of their apparently strong situation: Companies in a relatively comfortable position may be slower to implement the necessary cuts to adapt the business to the prevailing conditions. In relation to debt, companies must ensure that current operations are funded only by short-term debts such as credit lines. Companies with substantial debt levels should understand that they must react faster to changing conditions than companies with little debt.

Architecture practices in particular should be wary of slipping into micro-management by senior creative figures. As Chris Brandon of Pringle Brandon notes, “the creatives may have learnt certain skills along the way, but a business still needs a good team of managers and administrators”.

4. **Staff Cuts.** Cuts are the most sensitive area of managing through a recession, but their effectiveness in reducing costs quickly makes them irresistible, indeed, almost all of the companies which were interviewed for this report have already made staff cuts. However, more cuts are expected.

While redundancies may be inevitable, there may be more creative ways to manage staff adjustments. For example: Reduce staff working hours and adjusting salary to the new hours; reduce salaries or offer unpaid sabbaticals while retaining employee benefits. It may be that companies should change how they retain talent altogether, moving to a flexible program which recruits talent on a retained consultant basis when required. Moving to such a system will position the A&E industries well for the coming period and beyond, allowing the business to quickly scale upwards and downwards as conditions dictate. It also allows the industries to capture the skills of a wider talent pool, perhaps including some of the better individuals who have recently been made redundant at other competitive companies.
Companies should remember that it’s more important to get talent at exactly the point that it’s needed, than to have that talent as a permanent overhead. Martin Cook of BDP told us, “rather than offer flexible recruitment we’ve always preferred to commit to people, but ultimately we’ll take talent where we can get it”.

Who Goes?

Administrative departments tend to grow in good times, quickly appearing over-sized when the economy slows. In many cases, organisations could benefit from technological streamlining of administrative processes. However, such solutions are no panacea. Before making cuts, companies should understand which administrative functions are not adding value and which could be simplified without a loss of performance.

Marketing departments can often appear a luxury whose outputs are immeasurable. After cutting marketing budgets, many companies move quickly to cut marketing staff, but this is a dangerous technique. Effective marketing is even more important in a competitive market, and professional marketing staff often have the required strategic thinking skills for recessionary periods.

Knowledge Management is a key factor to consider; companies must ensure that they retain at least some of the knowledge and learning that will leave when talented people leave the company. It’s here that emerging technologies can take the strain. Many far-sighted organisations, including Disney and Shell, have established corporate Wikis. These are user-edited documents that detail the evolution of learning on a given topic. Such tools will be increasingly vital across all industries in future As we increasingly work in freelance, consultant and similar roles, one step removed from the corporate entity, knowledge retention will be a key tension and companies must begin to develop policies and knowledge management technologies urgently.

Above all, companies must ensure they retain their essential creative nature, while maintaining the administrative and managerial structures which underpin this creativity.
**Architects, Engineers and Technology**

In quintessentially project-based businesses, The A&E worlds must ensure that management and departmental decision-making is made on the basis of up to date and pertinent performance data. When this data must encompass data from sales, marketing, accounts, project management and other functions, it becomes clear that companies must find a way of streamlining IT and business processes. Something must clear the fog.

Comments left by our survey respondents reveal a degree of complexity and sensitivity in this area:

These include:

“We have invested heavily in technology.”

“Staff and training in the use of up to-date and advanced technology go hand in hand.”

There was also the suggestion that architects in particular have been poor at providing hard evidence of the value of their work. One comment was:

“Architects need to collect quantitative data on the value of their work to substantiate investment. There’s too much reliance currently on soft indicators”

Our interview program revealed three clear conclusions in the area of business technology:

**Firstly**, that the complex demands placed on organisations in the A&E fields bring with them the need for technological solutions, particularly in bringing visibility in areas such as project profitability and management accounts.

**Secondly**, that the challenges of the current recession, particularly the need to win the right business, and to streamline business processes, provide an even more compelling case for such solutions.

**Finally**, that the ‘long-tail’ of smaller practices in the A&E space, occupy a difficult middle ground: Small enough to rely on human processes in areas such as profitability, management and marketing, yet knowing that such systems don’t scale and aspiring to greater visibility of the company’s performance.
To some extent this final conclusion is the most intriguing. While larger organisations are extremely likely to invest in some form of technology solution(s), smaller companies face a difficult decision over when they have reached the optimum size to justify investment. Simon Jordan is a founder of the niche architectural design consultants Jump Studios. He told us, “when we’re small then perhaps we’d be encumbered by systems, they may get in the way of our creativity, but the nature of the business changes completely when you get ten or more staff. Where once I could detail project profitability on the back of an envelope, I now need the sort of financial and management instruments that only technology systems can offer”.

The architecture industry has tended to rely on the creativity of professionals at drawing boards and using CAD systems. It is a necessary but significant conceptual leap for such firms to recognise that the future of their business may be equally dependant on harnessing business performance data.

In relation to larger organisations, there were mixed views over whether their current technology solutions actually do offer them an insight into their strengths and weaknesses. A senior figure from a leading construction consulting firm told us that “our business is project-management and cost-management, but the reality is that our internal systems are a partially-ordered mess”.

Adrian Dobson of RIBA recognises that the Architecture industry has a particular problem in this area. “We encourage all practices to analyse their business performance using the best available tools, but it’s an area that we recognise needs work”.

At the other end of the spectrum, comments from Martin Cook of BDP, Europe’s largest design practice, suggest that some large firms have long recognised the need for effective technology systems. “A joined-up business and financials information system has been high on our agenda for the last 15 years. We’ve used a combination of in-house development and bought-in software to integrate almost all of our systems. We already have internal early-warnings for the profitability of our projects and soon we’ll have information portals for every individual. This isn’t a nice business to be in right now, but I’m confident that we’re well prepared, with the right forecasting and data”.
Finally, comments from our survey respondents suggested there is a significant market-facing difficulty, which lies between architects, engineers and the construction industry:

An architect at a leading practice in the North of England said, “the main issue is not necessarily with the architecture and engineering industries, which are generally up to speed with new and emerging technologies, it’s more with the interface with the construction industry which, with the exception of the larger construction companies, are well behind in the implementation of current and emerging technological tools”. In other words, there is little to unify processes along the A&E supply chain, which can result in inefficiency.

A potentially powerful solution which is emerging to address this problem is Building Information Modeling (BIM). BIM uses 3D, real-time modeling software in order to improve both building design and construction. The process generates building data during the life cycle of the building, and results in a Building Information Model, a single database, which reflects the building’s form, spatial relationships and components.

The principal value of BIM is that it helps the design team, including architects, engineers, surveyors, etc, to generate a single, virtual information model, which can then be handed on to the rest of the supply chain; construction, occupier and so on. Each party adds their own expertise and data into the model and all changes and evolution is applied to the single, central model.

This process reduces the information loss and error which often occurs when design hands over to construction. Computer modeling of each element of the building can identify conflicts and inform the relevant team. By ensuring that the building’s performance is modeled over time, the design team overcomes the criticism that theirs is a role without adequate feedback, while error reduction is likely to bring very significant cost-savings.
Leaders Required

Recession is a time for leadership, while conditions in the A&E industries bring up particular challenges that can only be faced by effective leaders. Without doubt, this is a business and career-defining period for architects and engineers.

Our survey reveals individuals ready to lead. When asked “Are you expecting to show high-profile ‘head over the parapet’ leadership in the current recession?” results were as follows:

Yes: 70%
No: 12%
Don’t know: 18%

In addition, survey respondents added their own comments that included:

“We are leaders and we will act like leaders”

“Securing work for the future is the most challenging activity in today’s market. This can only be done by the directors of the company”

“It is taking all our efforts to lead ourselves through this”

“Strong leadership is required to balance business decisions with resources as the pressure to reduce fees on projects becomes greater”

Nigel Webb of British Land is looking for a specific form of leadership from the A&E industries. “Architects and especially Engineers will need to show leadership in addressing building specifications and reducing costs. With values falling, they’ll have to establish where they’ve been over-specifying and find efficiencies. To put it simply, construction costs will have to fall or the sums won’t add up and companies simply won’t invest”.
A Recipe for Leadership

Surround yourself with problem solvers

Not ‘yes men’ or those in the surprising 12% above. Many effective leadership teams are forged in the heat of difficult times.

Communicate effectively

With clients. The A&E industries depend on strong and effective client relationships. Most clients are also experiencing recession, an apt topic to discuss over coffee, even with clients with no work currently. It’s important not to let long-established relationships slip.

With advisors. Particularly those at the bank and accountants, who may be a source of information and ideas in these tough times.

With staff members. Don’t allow gossip and rumor to fill an information vacuum. Tension is relieved by listening and sharing truthful updates on the state of the business.

Have a vision beyond the business of survival

How will your company align itself to the new vision of architecture and engineering, post-recession? How will you engage with the industry in order to understand and mould this new vision?
Market-Facing Issues

When our survey asked respondents to rank the following according to which is the most important over the next 12 months, results were as follows:

- **54%** - Taking a client-centred approach:
- **14%** - Keep up the fight, there are still billions in contracts out there
- **28%** - To drive efficiencies into existing buildings and new builds
- **4%** - To question norms and innovate

While it may sound self-explanatory to suggest that businesses must put their client at the centre of their offering, in fact our research and interview program suggests that the A&E industries have not been strong in this area.

**Martin Cook** of **BDP** said, “I’m not convinced that this industry listens to its clients particularly well”. **Frank Duffy**, co-founder of architectural practice **DEGW** put it well when observing, “we’ve often failed to question clients sufficiently. We should avoid just being a part of the supply-chain, with a supply and demand relationship to our clients. Instead we need to interrogate clients to understand their needs, and ensure we get proper feedback. Post-occupancy reviewing is patchy now, but it must become routine”. On the same theme, **Jeff Stewart** of **Architeriors** detected that “architects have tended to focus on themselves, and their own goals, at the expense of the client’s goals”.

**Nigel Webb** of **British Land** said, “the industry as a whole may have lost site of the fundamental purpose of buildings. I’ve seen commercial buildings go up without real consideration of occupier requirements and residential developments built in completely the wrong places. We all just got carried away, now we’ll have to be considered”.

It may also be that the recession provides the opportunity to re-examine the fundamentals of how we use buildings, particularly in the areas of tenancy and the role of the office. **Frank Duffy** of **DEGW** expects to see a rise in club-like, ‘pay as you go’ offices, such as the cooperative workspace movement ‘The Hub’. Such flexible, drop in arrangements are appealing because they match the flexible way in which many of us are now working, provide the collaborative spaces which are vital for knowledge work and opening up new and cohesive communities outside the confines of the corporate.
Working at Minimal Cost with Maximum Value

In stark contrast to the recent boom, architects and engineers must now prepare to reduce the cost of their work, while delivering value to the client and outperforming the competition.

Norms must be challenged, innovations are key and more economic systems of construction must be uncovered. Simon Pole of architecture and design firm Woods Bagot commented, “clients have come to expect us to be visionary and innovative, now they’re tending to want us to have the lowest fee. They don’t seem to have the appetite for an innovative approach as their timescales are short-term in this market and they just want to get the project done”. Pole went on to suggest that “innovation could suffer in such an environment, but ironically this situation demands innovation; different ways of approaching the challenges. If we are allowed more time at the inception of a project to explore innovative approaches it doesn’t necessarily need to cost more”.

A New Vision for Architects and Engineers?

The A&E industries are in survival mode, but must soon begin to re-think their game. With major capital projects either frozen or under threat, the industry is likely to rely in the short and medium term on ‘churn’ type projects and retro-fitting of existing real estate stock, particularly in the commercial sector. Driving efficiencies into buildings is now a key professional and creative challenge.

There is an oversupply of property stock in the commercial sector. Companies wish to use existing space more flexibly and efficiently. A ‘green bounce’ is on the way, which will prioritise energy efficiency and sustainability, at the expense of wasteful construction methods. The next generation of graduate professionals seem more committed than any other to ethical careers and sustainable lives.

Frank Duffy of DEGW detects a long established misallocation of talent in the industry, from those looking to build for the sake of establishing personal monuments, to those creative minds whose skills can’t be properly expressed in smaller practices. He suggests that the new conditions “could see the retooling of this resource, allocating their talents to improving existing buildings”.

All roads lead to retrofitting of existing stock. In the heat of the recession it’s dangerous to make firm predictions about the direction of the industry, but there is every reason to suspect that this could mark a redefinition of the scope of the A&E professions.

Allied to this trend is the issue of VAT. A long-running campaign to reduce VAT for home improvements to 5% recently won backing at the EU, giving the UK the option of adopting the measure. Many industry groups, including the RIBA, are now campaigning for this to be extended to the purchasing of construction work. While such a measure would only ever apply to materials purchase, leaving the professional fees chargeable at the normal prevailing rate, it’s thought that the measure would provide a significant boost to the refurbishment industry as a whole.

Adrian Dobson of RIBA is optimistic, “the cause has a fair wind behind it now, the government should soon recognise the potential stimulus effect of 5% VAT on construction work. The current conditions make it an obvious move”.

23
Five Principles for the Recessionary and Post-Recession Landscape

Our research program has led to the development of five principles which we contend should underpin the A&E industry’s response to the current recession. The principles take account of societal, business and environmental trends, and will smooth the transition to the new models of architecture and engineering sure to emerge, post-recession.

1. Increase the efficiency and usability of space

During a recession it’s vital to ensure that costly real estate is used efficiently. Indy Johar of architecture practice Architecture00:/ suggests that “architects should move beyond the vanity of personal monuments, and instead make providing optimum use-value their guiding principle”.

Tired measures, such as the number of staff per square metre, should be replaced by a more sophisticated understanding of the flexibility of space use and its change over the course of days, weeks and months.

Space utilisation must be maximised in order to prevent the waste of heating and lighting unused space.

2. Support and drive new ways of working

Agile, mobile working is a reality today. The recession and ongoing technological revolution are ensuring that more workers operate one step outside of narrow corporate confines, in freelance and consultant-type roles. The city at large, with its layer upon layer of overlapping physical and virtual networks, is becoming a viable ‘third place’ for such work. This is a huge conceptual and professional challenge for the A&E industries, marking a slow but fundamental shift in the value of corporate real estate.

The A&E industries must build new practice, knowledge and norms for this new world. Where today the industries have expertise in design and construction, they must now incorporate expertise in communications, technology and community. The industries must update their knowledge of what goes on within buildings and must develop a new understanding of what goes on between buildings.
3. Develop buildings which attract talent

12 Years after McKinsey declared a 20-year ‘War for Talent’, the office environment remains at the front-line in this war. When the recovery begins, and even during the recession, employees are looking beyond remuneration and seeking meaning at work, to feel good at work and to feel valued at work. Corporate real estate can be developed which supports all of these goals. Such buildings will blend pervasive technology with collaboration space, concentration space and ‘off curriculum’ contemplation space, what Indy Johar of Architecture00:/ calls “slack space”.

4. Innovate with sustainability measures that harness the latest technologies

Environmental sustainability and corporate social responsibility are new business realities. Commercial buildings, accounting for 20% of all carbon emissions, are prime targets for carbon reduction. This offers the A&E industries an unprecedented opportunity to lead the new sustainability discipline.

In relation to existing real estate, research suggests that low-cost technology solutions could unlock up to 30% in power efficiency savings. In relation to new buildings, the industry has long tolerated excessive waste in the construction process; leaders will find competitive advantage by bringing efficiencies to this area.

The A&E industries should develop a vision for the future of our existing and new buildings, with optimised building systems, high space utilisation, energy efficient technologies and increased individual control of energy usage.

5. Re-invent client communication.

This report has suggested that client communication is a weakness of the A&E industries. Frank Duffy of DEGW wondered if “the professionals, with all their expertise, are adequately expressing their views?” While Martin Cook of BDP wondered if the industries even listen to what they’re told. Further, he said, “we need to recognise with our clients that recessions need organisational creativity”.

Client communications must change, in recognition of the new world in which the A&E industries operate. This is a major opportunity for leadership. Professionals who understand the changing nature of place in the digital economy, who understand the changing relationships between buildings, work and the city, and who can deliver
sustainable buildings, can lay claim to a new and broader role. They can be Place Practitioners, becoming a vital and valuable advisor for the client side.

As Indy Johar of Architecture00:/ put it, “when we’re the custodians of place, we can acknowledge that the solution to a client problem may not even be a building. Perhaps they need the use of a civic institution, or to find ways of building a cohesive community”.

A good piece of architecture or design should be able to create conditions. Architects should be able to understand and communicate the ecology of the building and its social protocols. For example, an architect could design-in a 4pm tea break in an office, in order to address waning blood sugar levels throughout the afternoon. An architect who simply communicates value and business models to a client is unlikely to convey something as subtle as this.
Reasons to be Cheerful

During the course of our research process we closed every interview with a request for “reasons to be cheerful”. The response from the A&E industries, while anecdotal, provides some crumbs of comfort in what are extraordinarily challenging times. Selected highlights include:

“We’re being asked to solve problems differently and cheaper, and you know what? That gives us the opportunity to be creative. It’s what we’re good at”

“This remains a fun profession. I get to be an artist, a business man and to improve the world just a little bit”

“A lot of the best ideas come out of pressure and constraints”

“Our guys have really pulled their finger out. We’re more on the ball and we’re bidding on more than we ever have”

“The sustainability argument is bringing an ethical dimension to what we do; there are better ways of working and living”

And finally: “A bloody great shock now and then is probably a useful thing”

The A&E industries are under pressure, must survive the current recession and must adapt to the new climate that follows, but we can look forward to a new architecture when it does. As the boom period brought with it iconic, bigger and shinier buildings, we may be in for a new modesty, which would inevitably be followed by a reaction to modesty. Applications to British architecture schools are at an all-time high.

The worlds of architecture and engineering demand an optimism in the face of the most adverse financial conditions. It should be remembered that the Empire State Building, one of the all-time marvels of the industrial age, began to rise from the ground just three months after the Wall Street Crash.
About UNWIRED

The UNWIRED™ brand is a series of knowledge resources that provides insight for companies. UNWIRED seeks to build a bridge between new technology and real estate, demonstrating how innovation will change work and the workplace.

UNWIRED byteSIZED guides provide a focused appraisal of new technologies, explaining and predicting their impact on business, work and the workplace.

The UNWIRED newsletter is published 10 times a year and keeps people informed both in terms of technology and workplace innovation, through factual analysis and practical case studies.

UNWIRED events include regular briefings and other events focused on providing technology advice to companies in the process of workplace change. UNWIRED holds its annual WorkTech conferences at the British Library in London, as well as in Amsterdam and New York, examining the implications of convergence between the worlds of technology and real estate.

About the Author

Richard is an expert commentator on workplace technology trends, with particular expertise in the expectations and technology use of the next generation and how technology, design and architecture can be harnessed to provide workspaces conducive to work in the 21st Century.

Richard holds an Associate position as Head of Knowledge at Unwired Ventures, edits a range of publications and is a widely published writer. He has written for publications such as The Guardian, Director Magazine, FX Magazine, Mix and Silicon.com.

In addition Richard has written for organisations as diverse as the BBC, Toshiba, Rio Tinto, Nokia and Lexmark.

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With more than 12,000 customers worldwide, Deltek is the leading provider of enterprise management software for project-focused organisations. Deltek enables companies to maximise profitability and productivity, integrating all aspects of their businesses. Deltek products power a myriad of front- and back-office processes including accounting, billing, resource planning, budgeting and control, business intelligence, CRM and proposal automation, employee time and expense, HR management, procurement and materials management, earned value management and project management.

Contact: Marcus Leathwood
Mobile: +44 (0) 7920 484487
Email: marcusleathwood@deltek.com
Appendix I – Survey Data

As part of its research process, Unwired Ventures conducted a survey, targeting senior-level contacts in the A&E industries, in the UK, Europe and US. The survey responses were anonymous, helping to ensure open responses. The survey findings are discussed throughout the report and shown in their entirety below.

<table>
<thead>
<tr>
<th>Will public works/infrastructure projects have a significant positive effect for your business in the coming period?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer Options</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Will the Architect/Engineering industry as a whole experience a ‘green bounce’?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer Options</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Some argue that the current economic conditions, over supply of commercial property and environmental concerns should drive a refocusing of the Architect/Engineering industry towards retrofitting of existing real estate. Do you:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer Options</td>
</tr>
<tr>
<td>Tend to agree</td>
</tr>
<tr>
<td>Tend to disagree</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Some argue that the Architect/Engineering industry has tended to invest heavily in staff, when a technology led approach could have been used to streamline administrative and design processes. Do you:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer Options</td>
</tr>
<tr>
<td>Tend to agree</td>
</tr>
<tr>
<td>Tend to disagree</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
</tbody>
</table>
Rank the following according to their level of importance over the next twelve months?

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>The most important factor</th>
<th>Second most important factor</th>
<th>Third most important factor</th>
<th>Fourth most important factor</th>
<th>Rating Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessing the businesses capital needs</td>
<td>5</td>
<td>7</td>
<td>14</td>
<td>23</td>
<td>3.12</td>
</tr>
<tr>
<td>Forecasting cashflow</td>
<td>23</td>
<td>15</td>
<td>7</td>
<td>4</td>
<td>1.84</td>
</tr>
<tr>
<td>Controlling credit</td>
<td>4</td>
<td>16</td>
<td>16</td>
<td>14</td>
<td>2.80</td>
</tr>
<tr>
<td>Building the value of work in progress</td>
<td>18</td>
<td>12</td>
<td>13</td>
<td>7</td>
<td>2.18</td>
</tr>
</tbody>
</table>

Are you currently able to capture, present and disseminate meaningful project, financial and marketing information around the business?

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Frequency</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>70.0%</td>
<td>35</td>
</tr>
<tr>
<td>No</td>
<td>16.0%</td>
<td>8</td>
</tr>
<tr>
<td>Not a priority</td>
<td>14.0%</td>
<td>7</td>
</tr>
</tbody>
</table>

In the current conditions, is your office fit for purpose?

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Frequency</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>78.0%</td>
<td>39</td>
</tr>
<tr>
<td>No</td>
<td>10.0%</td>
<td>5</td>
</tr>
<tr>
<td>Don't know</td>
<td>10.0%</td>
<td>5</td>
</tr>
<tr>
<td>Do we even need an office?</td>
<td>4.0%</td>
<td>2</td>
</tr>
</tbody>
</table>

Rank the following according to which is the most important over the next 12 month.

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>The most important</th>
<th>Second most important</th>
<th>Third most important</th>
<th>Fourth most important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking a client-centred approach</td>
<td>27</td>
<td>13</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Keep up the fight, there are still billions in contracts out there</td>
<td>11</td>
<td>13</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>To question norms and innovate</td>
<td>4</td>
<td>12</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>Drive efficiencies into existing buildings and new builds</td>
<td>7</td>
<td>12</td>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

Which is the single most important building principle over the next three to five years?

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Frequency</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase the efficiency and useability of space</td>
<td>40.0%</td>
<td>20</td>
</tr>
<tr>
<td>Enable agile working</td>
<td>16.0%</td>
<td>8</td>
</tr>
<tr>
<td>Develop buildings which attract talent</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Innovate with active sustainability technology &amp; measures</td>
<td>44.0%</td>
<td>22</td>
</tr>
</tbody>
</table>
Is your business well equipped to deal with the global nature of larger clients?

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Frequency</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>70.0%</td>
<td>35</td>
</tr>
<tr>
<td>No</td>
<td>18.0%</td>
<td>9</td>
</tr>
<tr>
<td>Don't know</td>
<td>12.0%</td>
<td>6</td>
</tr>
</tbody>
</table>

Do you view the current conditions in your industry as primarily:

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Frequency</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A business challenge</td>
<td>44.0%</td>
<td>22</td>
</tr>
<tr>
<td>A personal challenge</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>They're equal</td>
<td>46.0%</td>
<td>23</td>
</tr>
<tr>
<td>What's the difference?</td>
<td>10.0%</td>
<td>5</td>
</tr>
</tbody>
</table>

Are you expecting to show high-profile 'head over the parapet' leadership in the current recession?

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Frequency</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>70.0%</td>
<td>35</td>
</tr>
<tr>
<td>No</td>
<td>12.0%</td>
<td>6</td>
</tr>
<tr>
<td>Don't know</td>
<td>18.0%</td>
<td>9</td>
</tr>
</tbody>
</table>
Appendix II

List of the new sustainability competencies to be demanded from the A&E industries.

- At the broadest level, reducing the amount of natural resources consumed in building construction and use.

- Techniques to harness renewable energy resources, such as photo-voltaics, green roofs, wind-turbines, etc. Note also that value will be added by establishing how such tools can be tailored to the usage and life cycle of the building. This is a sophisticated task which won’t be achieved simply by installing a random selection of technologies.

- Understanding the aesthetics of sustainable design, producing buildings that are in harmony with the surrounding area and resources.

- Understanding and deploying appropriate ‘green’ materials. Emerging materials include bamboo, wood from sustainable forests, recycled stone and metal, baked earth, high and ultra-high performance concrete, demolition debris and others. Materials should be sourced locally where possible to minimise the energy used in their transportation.

- Reducing the energy used within buildings. This can be addressed by increasing the efficiency of the building envelope, insulation, efficient windows, passive solar design which positions windows and walls in such a way to maximise solar gain in winter and minimise it in summer, solar water heating, micro-generation and others.

- Reducing the waste of energy, water and materials during the construction process, including the use of ‘grey water’.

- Practices that are tailored to BREEAM (BRE Environmental Assessment Method) and other sustainability codes, acting in advance and in excess of legislative requirements.